

advanced FLOW engineering
Instruction Manual P/N: 46-71410A / 46-71410B

Ford 8.8" – 10 Bolt Rear Differential Cover

Make: Ford	Model: F-150	Year: 1983-2014	Engine: All
Make: Ford	Model: Ranger	Year: 1991-2011	Engine: V6-3.0L/4.0L
Make: Ford	Model: Mustang	Year: 1986-2014	Engine: V8-4.6L/5.0L/5.8L (sc)
Make: Ford	Model: Explorer	Year: 1991-2001	Engine: V6-4.0L/V8-5.0L
Make: Ford	Model: Bronco	Year: 1983-1996	Engine: I6-4.9L/V8-5.0L/V8-5.8L



- Please read the entire instruction manual before proceeding.
- Ensure all components listed are present.
- For technical support please call 951-493-7185.
- Ensure you have all necessary tools before proceeding.
- Do not attempt to work on your vehicle when the engine is hot.
- Retain factory parts for future use.

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Label	Qty.	Description	Part Number
A1	1	Differential Cover – Raw, Machined Fins (46-71410A)	05-61589A
A2	1	Differential Cover – Black, Machined Fins (46-71410B)	05-61589B
B	1	RTV Silicone	05-60096
C	10	Screw, Socket Head Cap: 5/16-18 x 1.0 S/S	03-50227
D	10	Washer, Flat: 5/16 AN S/S	03-50228
E	1	Plug, M12 x 1.25	03-50385
F	1	Washer, Aluminum: M12,15.85MM OD	03-50384
G	1	Plug, 1/8" NPT	03-50029
H	1	Plug, Magnetic 3/4" NPT, 6" Deep Reach (46-71410B)	03-50223
J	1	Porthole View Gauge (46-41410B)	03-50224
K	1	Plug, 3/4" NPT (46-71410A)	03-50391
M	1	Plug, 1" NPT (46-71410A)	03-50390

Tools Needed:

- 1/2" Socket
- 1-1/2" Socket
- 14mm Socket
- 3/16" Hex-Bit Socket
- 1/4" Hex-Bit Socket
- Ratchet & Extension
- Prying Bar
- Torque Wrench

Warranty Information available at <https://afepower.com/contact#warranty>

Emissions Disclaimer: This product does not require a CARB EO#.



A1



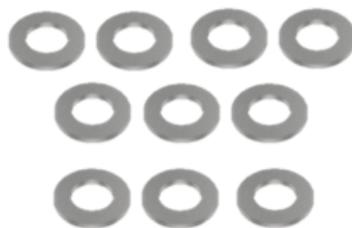
A2



B



C



D



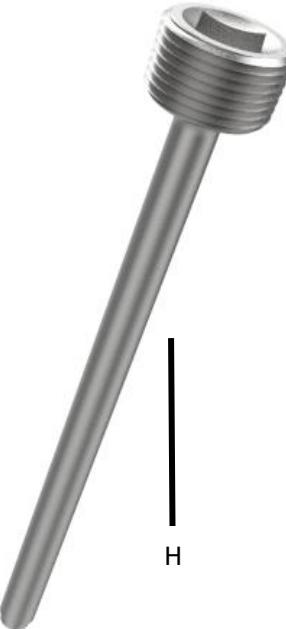
E



F



G



H



J



K



M



Figure A

Refer to Figure A for Steps 1-3

Step 1: Park the vehicle on level ground and engage the parking brake. Wait for the vehicle to cool down before beginning installation.

Step 2: Remove the bottom seven (7) hex head screws from the stock differential cover.

Step 3: Loosen, but do not remove, the top three (3) hex head screws and break the seal on the stock differential cover and drain the gear oil completely.



Figure B

Refer to Figure B for Steps 4-5

Step 4: Remove the three (3) remaining hex head screws holding the stock differential cover.

Step 5: Carefully pry the stock differential cover away from the differential housing. Use caution when removing the stock differential cover.



Figure C

Refer to Figure C for Step 6

Step 6: Thoroughly clean the mating surface.

Note: Clean the surrounding area of debris.



Figure D

Refer to Figure D for Step 7

Step 7: Apply a continuous bead of RTV silicone to the mating surface of the aFe differential cover, making sure to go around each screw hole.



Figure E

Refer to Figure E for Steps 8-10

Step 8: Carefully install the aFe differential cover until it contacts the differential housing.

Step 9: Install the supplied ten (10) socket head cap screws and ten (10) washers to secure the aFe differential cover. Tighten snugly but do not fully torque at this stage.

Step 10: Torque the screws to **15 ft-lb (20 Nm)** in an X-pattern.



Figure F

Refer to Figure F for Steps 11-13

Step 11: Apply Teflon pipe sealant to the threads of the supplied 1" NPT fitting and install it into the large side port of the aFe differential cover. Tighten securely.

- If you are installing cover **46-71410A**, use the 1" NPT plug included the kit.
- If you are installing cover **46-71410B**, use the 1" NPT sight glass included in the kit.

Note: Do not overtighten.

Step 12: Install the supplied M12 x 1.25 drain plug and crush washer into the bottom of the aFe differential cover and torque to **20 ft-lb (27 Nm)**.

Step 13: Allow the silicone to cure for 1 hour before filling with the vehicle manufacturer's recommended gear oil.



Figure G

Refer to Figure G for Step 14

Step 14: Using the top fill port on the aFe differential cover, fill the differential with the vehicle manufacturer's recommended gear oil until it begins to flow out of the 1/8" NPT side port. (approximately 4 quarts).



Figure H

Refer to Figure H for Steps 15-16

Step 15: Apply Teflon pipe sealant to the threads of the 1/8" NPT plug.

Step 16: Install the 1/8" NPT plug into the side port of the aFe differential cover and tighten securely.

Note: Do not overtighten.



Figure I

Refer to Figure I to Step 17

Step 17: Apply Teflon pipe sealant to the threads of the supplied 3/4" NPT fitting and install it into the top of the aFe differential cover. Tighten securely.

- If you are installing cover **46-71410A**, use the 3/4" NPT plug included the kit.
- If you are installing cover **46-71410B**, use the 3/4" NPT magnetic 6" deep reach plug included in the kit.

Note: Do not overtighten.



Figure J

Refer to Figure J for Step 18

Step 18: Installation is now complete.



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